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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/725,521

12/03/2003

Nobuyuki Shirie

8012-1218

3762

466

7590

12/20/2005

YOUNG & THOMPSON
745 SOUTH 23RD STREET
2ND FLOOR
ARLINGTON, VA 22202

EXAMINER

NGUYEN, THONG Q

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

54

Office Action Summary	Application No. 10/725,521	Applicant(s) SHIRIE, NOBUYUKI	
	Examiner Thong Q. Nguyen	Art Unit 2872	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-13, 21, 22, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25 is/are allowed.
- 6) ☒ Claim(s) 6-13, 21, 22 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Nov. 25, 2005 has been entered.

Response to Amendment

2. The present Office action is made in response to the amendment filed on 11/25/2005. It is noted that in the amendment, applicant has amended claims 6 and 25, and canceled claims 1-5 and 23. The pending claims 6-13, 21-22 and 24-25 are examined in this Office action. Note that claims 14-20 were canceled by applicant in the amendment of 3/14/05.

Drawings

3. The drawings contained one sheet of corrected figure 3 was received on 11/25/05. These drawings are approved by the Examiner.

Specification

4. The lengthy specification which is amended by the amendment of 11/25/05 has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claim 25 is objected to because of the following informalities. Appropriate correction is required.

In claim 25: the use of the terms "the deform lens element" in each of lines 14, 16 and 18 is improper. Applicant is respectfully invited to review the claim on lines 10-12 which recites that one of the lens elements presses and deforms the flare stopper. In other words, the flare stopper is deformed, not the lens element used to deform the flare stopper. Thus, should the mentioned terms be changed to --said lens element-- or other suitable term(s) to make clear the feature claimed?

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. Claims 6 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azami et al (U.S. Patent No. 5,568,322) in view of Kohmoto (U.S. Patent No. 5,420,656, of record).

Azami et al disclose a lens system having a lens barrel for supporting a plurality of lens elements and a light-intercepting element. The system as described in columns 1-3 and shown in figure 2 comprises a lens barrel (11) supporting lens elements (L1-L3) and a light intercepting element (13) which is disposed between the lens element (L2) and (L3). The light-intercepting element as shown is in contact with the lens surface of the lens element (L2) and oriented in a direction which is inclined to the optical axis of the lens system. The inner periphery of the

light-intercepting element defines a circular configuration for allowing light passing therethrough. See column 1, last three lines through column 2, first three lines. The arrangement of the light-intercepting element inside the lens elements will allow passage of light while blocking light incident on the peripheral portion of the lens element (L3). As a result of the combination of the lens elements and the light-intercepting element provided by Azami et al, the only feature missing from the light-intercepting element provided by Azami et al is that they do not clearly state that the inner section of the light-intercepting element has a side surface of a circular truncated cone as claimed. However, the use of a light-intercepting element wherein the inner section of the light-intercepting element is made as a side surface having a truncated cone is known to one skilled in the art as can be seen in the system provided by Kohmoto.

In particular, Kohmoto discloses a photographic optical device having a lens barrel supporting a plurality of lens elements and a light intercepting element for preventing the ghost or flare. In the embodiment described in columns 2-3 and shown in fig. 1, the camera comprises a lens barrel (11) for supporting/holding a taking lens system (L1, L2) and a light intercepting element (25) installed inside the lens barrel (11) for the purpose of preventing/intercepting harmful light to the image quality. Regarding to the structure of the light intercepting element (25), it is noted that in column 4 and shown in fig. 3, the light intercepting element (25) comprises a thin sheet of elastic material and defines a circular opening. The light intercepting member comprises a top planar section bonding to a ring

shaped member (26) and a curved section having a shape of a side face of a circular truncated cone inclined to the optical axis of the taking lens system wherein the innermost portion of the second section defines the circular inner periphery for allowing light passing therethrough. It is noted that the outermost portion of the curved section meets the innermost portion of the planar section. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the lens barrel supporting a plurality of lens elements and a light intercepting element as provided by Azami et al by using a light intercepting element having its inner periphery of a truncated cone as suggested by Kohmoto for the purpose of increasing the ability of preventing light harmful to the formation of the image quality.

8. Claims 8-12, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azami et al in view of Kohmoto as applied to claim 6 above, and further in view of the prior art admitted by the applicant as stated in the present specification in page 1.

The system with the light intercepting mask as provided by Azami et al and Kohmoto does not explicitly state that the mask is made by phosphor bronze plate or a Mylar film by sheet metal stamping with thickness is approximately 0.03 to 0.05 mm as claimed. However, the use of a light intercepting element made by a Mylar film having such a thickness is known to one skilled in the art as admitted by the applicant in the present specification in page 1. Regarding to the use of phosphor bronze material for making the light intercepting element as recited in present claims, such a recitation is merely that of a preferred

embodiment and no criticality has been disclosed. The support for that conclusion is found in the present claims 4-5 and 10-11 in which claims, the applicant has claimed that the material of the light intercepting element is Mylar. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the light intercepting mask provided by Azami et al and Kohmoto by using Mylar material as suggested by the prior art or other suitable material available in the art/market including the bronze material for making the light intercepting mask to meet a particular design/application. See *In re Leshin*, 125 USPQ 416.

Regarding to the feature that the flare stopper and one of the lens elements are arranged so that one of the lens elements presses and deforms the flare stopper so that the inner periphery of the flare stopper is inclined with respect to the optical axis of the taking lens unit as claimed in present claims 12 and 25, such a feature is readable in the camera provided by Azami et al. In particular, the lens elements (L1-L3) and the light intercepting element (13) are arranged within the supports (11 and 12) in which the support (12) presses the lens element (L1) which in turn presses the lens element (L2) at its abutting surface (14). The lens element (L2) presses the light intercepting element (13) at its abutting surface (15) and then the lens element (L3) in association with the flange (11b) of the support (11). It is also noted that the material of the light intercepting element (13) is a plastic material. See column 3. As a result of such a structure, the lens element (L2) presses the light intercepting element (13) and will make the light

intercepting element deform due to its plastic material so that the inner periphery portion of the light intercepting element is inclined with the optical axis of the lens system.

9. Claims 6-7, 13 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudo et al (U.S. Patent No. 4,886,342, of record) in view of Kohmoto (U.S. Patent No. 5,420,656, of record).

Kudo et al disclose a lens system having a lens barrel for supporting a plurality of lens elements and a light-intercepting element. The system as described in columns 2-4 and shown in figures 1-2 comprises a lens barrel system supporting lens elements (1-3) and a light intercepting element (7) which is disposed between the lens element (2) and (3). The light-intercepting element as shown in figure 2 is in contact with a spacer (6) which spacer is disposed between the two lens elements (2 and 3) and the light-intercepting element (7) is disposed between the lens element (2) and the spacer (6). The arrangement of the light-intercepting element inside the lens elements will allow passage of light while blocking light incident on the peripheral portion of the lens element (3). As a result of the combination of the lens elements and the light-intercepting element provided by Kudo et al, the only feature missing from the light-intercepting element provided by Kudo et al is that they do not clearly state that the inner periphery has a side surface of a circular truncated cone as claimed. However, the use of a light-intercepting element wherein the inner periphery of the light-

intercepting element is made as a side surface having a truncated cone is known to one skilled in the art as can be seen in the system provided by Kohmoto.

In particular, Kohmoto discloses a photographic lens unit having a lens barrel supporting a plurality of lens elements and a light intercepting mask for preventing the ghost or flare. In the embodiment described in columns 2-3 and shown in fig. 1, the camera comprises a lens barrel (11) for supporting/holding a taking lens system (L1, L2) and a light intercepting element (25) installed inside the lens barrel (11) for the purpose of preventing/intercepting harmful light to the image quality. Regarding to the structure of the light intercepting element (25), it is noted that in column 4 and shown in fig. 3, the light intercepting element (25) comprises a thin sheet of elastic material and defines a circular opening. The light intercepting member comprises a top planar section bonding to a ring shaped member (26) and a curved section having a shape of a side face of a circular truncated cone inclined to the optical axis of the taking lens system wherein the innermost portion of the second section defines the circular inner periphery for allowing light passing therethrough. It is noted that the outermost portion of the curved section meets the innermost portion of the planar section. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the lens barrel supporting a plurality of lens elements and a light intercepting element as provided by Kudo et al by using a light intercepting element having its inner periphery of a truncated cone as

suggested by Kohmoto for the purpose of increasing the ability of preventing light harmful to the formation of the image quality.

10. Claims 8-11, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudo et al in view of Kohmoto as applied to claim 6 above, and further in view of the prior art admitted by the applicant as stated in the present specification in page 1.

The system with the light intercepting mask as provided by Kudo et al and Kohmoto does not explicitly state that the mask is made by phosphor bronze plate or a Mylar film by sheet metal stamping with thickness is approximately 0.03 to 0.05 mm as claimed. However, the use of a light intercepting element made by a Mylar film having such a thickness is known to one skilled in the art as admitted by the applicant in the present specification in page 1. Regarding to the use of phosphor bronze material for making the light intercepting element as recited in present claims, such a recitation is merely that of a preferred embodiment and no criticality has been disclosed. The support for that conclusion is found in the present claims 4-5 and 10-11 in which claims, the applicant has claimed that the material of the light intercepting element is Mylar. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the light intercepting mask provided by Kudo et al and Kohmoto by using Mylar material as suggested by the prior art or other suitable material available in the art/market including the bronze material for

making the light intercepting mask to meet a particular design/application. See In re Leshin, 125 USPQ 416.

Allowable Subject Matter

11. Claim 25 is allowed.
12. The following is a statement of reasons for the indication of allowable subject matter:

The taking lens unit comprises a lens barrel supporting a plurality of lens elements and a flare stopper as recited in present claim 25 is patentable with respect to the prior art, in particular, the U.S. Patent Nos. 4,886,342; 5,568,322; 5,420,65 and 6,392,825 by the limitations related to the structure of the flare stopper and the lens which presses and deforms the flare stopper. In particular, while the use of a stop between two lens elements or between a lens and a spacer wherein the stop has an inner opening for allowing light passing therethrough is known to one skilled in the art as can be seen in each of the mentioned Patents; however, the prior art does not disclose a combination of lens elements and a flare stopper wherein the combination has the claimed feature thereof: "the flare stopper and one of the lens elements are arranged so that one of the lens elements presses and deforms...deform lens".

Response to Arguments

13. The amendments to the claims and applicant's arguments filed on 11/25/05 have been fully considered but yielded the following conclusions.

A) Regarding to the objection to the specification as failing to provide proper antecedent basis for the claimed subject matter set forth in the previous Office action,

the objection is now withdrawn due to the amendment to the specification filed on 11/25/05.

B) Regarding to the rejection of claims 21-22 under 35 U.S.C. 112, first paragraph, as set forth in the Office action of 5/24/05, the rejection is now withdrawn because applicant's arguments provided in the Response filed on 9/26/05 are persuasive.

C) Regarding to the rejection of claims 1 and 23 under 35 USC 102(b) over the art of Kohmoto, the rejection is moot by the cancellation of those claims.

D) Regarding to the rejection of claims 2-5 under 35 USC 103(a) over the art of Azami et al (or Kudo et al), Kohmoto and the admitted prior art, the rejections are moot by the cancellation of those claims.

E) Regarding to the rejection of claims 6 and 24 under 35 USC 103(a) over the art of Azami et al and Kohmoto et al, the amendments to claim 6 is not sufficient to overcome the rejection, and applicant's arguments provided in the amendment of 11/25/05, pages 8-9, have been fully considered but they are not persuasive.

First, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Second, while the Examiner agrees that the light-intercepting element provided by Kohmoto is used as a light seal between lens barrels and not used at a

location inside a lens barrel where light passed through lens elements incidents on the light intercepting element as claimed; however, applicant is respectfully invited to review the rejection in which the Examiner has used the art of Kohmoto to show to one skilled in the art the fact that a light intercepting element is able comprises two sections in which one section has a planar configuration and the other section has a curved or truncated configuration. In other words, in the rejection, the Examiner has stated that: " Regarding to the structure of the light intercepting element (25), it is noted that in column 4 and shown in fig. 3, the light intercepting element (25) comprises a thin sheet of elastic material and defines a circular opening. The light intercepting member comprises a top planar section bonding to a ring shaped member (26) and a curved section having a shape of a side face of a circular truncated cone inclined to the optical axis of the taking lens system wherein the innermost portion of the second section defines the circular inner periphery for allowing light passing therethrough. It is noted that the outermost portion of the curved section meets the innermost portion of the planar section. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the lens barrel supporting a plurality of lens elements and a light intercepting element as provided by Azami et al by using a light intercepting element having its inner periphery of a truncated cone as suggested by Kohmoto for the purpose of increasing the ability of preventing light harmful to the formation of the image quality." (Office action of 5/24/05, pages 6-7). Regarding to the feature that the light-intercepting element is located inside

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the lens barrel and between two lens elements, such structure is clearly disclosed in the primary reference, i.e., the art of Azami et al, which discloses a lens barrel (11) supporting a plurality of lens elements (L1-L3) and a light intercepting element (13) which is disposed between lens elements (L2 and L3).

F) Regarding to the rejection of claims 8-12 and 21 under 35 USC 103(a) over the art of Azami et al, Kohmoto et al and the admitted prior art described in the present specification, it is noted that since applicant has not provided any specific arguments except a reference that the admitted prior art does not overcome the shortcomings of Kohmoto, and thus the rejection is still maintained for the same reasons as set forth in the previous Office action and repeated in this Office action. Applicant should note that the so-called "shortcomings" in the art of Kohmoto is clearly disclosed in the primary reference, i.e., the art of Azami et al, which discloses a lens barrel (11) supporting a plurality of lens elements (L1-L3) and a light intercepting element (13) which is disposed between lens elements (L2 and L3).

G) Regarding to the rejection of claims 6-7, 13 and 22 under 35 USC 103(a) over the art of Kudo et al and Kohmoto et al, the amendments to claim 6 is not sufficient to overcome the rejection, and applicant's arguments provided in the amendment of 11/25/05, page 11, have been fully considered but they are not persuasive.

First, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642

F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Second, while the Examiner agrees that the light-intercepting element provided by Kohmoto is used as a light seal between lens barrels and not used at a location inside a lens barrel where light passed through lens elements incidents on the light intercepting element as claimed; however, applicant is respectfully invited to review the rejection in which the Examiner has used the art of Kohmoto to show to one skilled in the art the fact that a light intercepting element is able comprises two sections in which one section has a planar configuration and the other section has a curved or truncated configuration. In other words, in the rejection, the Examiner has stated that: " Regarding to the structure of the light intercepting element (25), it is noted that in column 4 and shown in fig. 3, the light intercepting element (25) comprises a thin sheet of elastic material and defines a circular opening. The light intercepting member comprises a top planar section bonding to a ring shaped member (26) and a curved section having a shape of a side face of a circular truncated cone inclined to the optical axis of the taking lens system wherein the innermost portion of the second section defines the circular inner periphery for allowing light passing therethrough. It is noted that the outermost portion of the curved section meets the innermost portion of the planar section. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the lens barrel supporting a plurality of lens elements and a light intercepting element as provided by Kudo et al by using a

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light intercepting element having its inner periphery of a truncated cone as suggested by Kohmoto for the purpose of increasing the ability of preventing light harmful to the formation of the image quality." (Office action of 5/24/05, pages 9-10). Regarding to the feature that the light-intercepting element is located inside the lens barrel and between two lens elements, such structure is clearly disclosed in the primary reference, i.e., the art of Kudo et al, which discloses a lens barrel supporting a plurality of lens elements (1-3) and a light intercepting element (7) which is disposed between lens element (2) and the spacer (6).

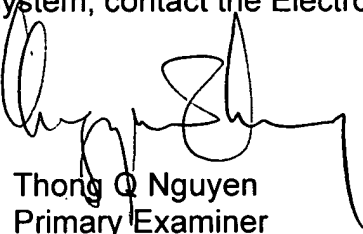
H) Regarding to the rejection of claims 8-12, 21 and 24 under 35 USC 103(a) over the art of Kudo et al, Kohmoto et al and the admitted prior art described in the present specification, it is noted that since applicant has not provided any specific arguments except a reference that the admitted prior art does not overcome the shortcomings of Kohmoto, and thus the rejection is still maintained for the same reasons as set forth in the previous Office action and repeated in this Office action. Applicant should note that the so-called "shortcomings" in the art of Kohmoto is clearly disclosed in the primary reference, i.e., the art of Kudo et al, which discloses a lens barrel (11) supporting a plurality of lens elements (L1-L3) and a light intercepting element (13) which is disposed between lens elements (L2 and L3).

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Nguyen
Primary Examiner
Art Unit 2872



FIG.3

